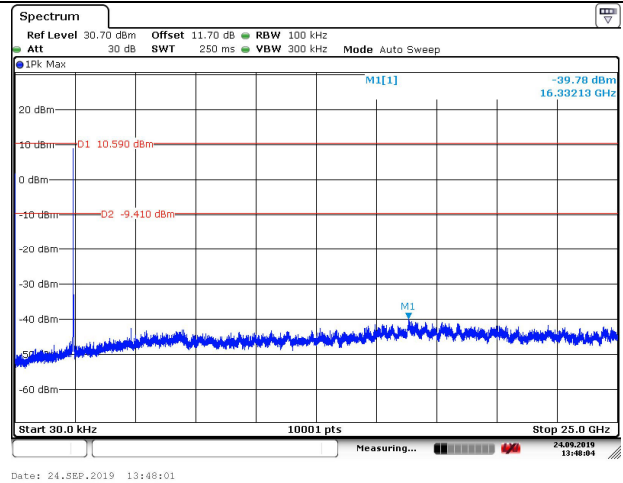
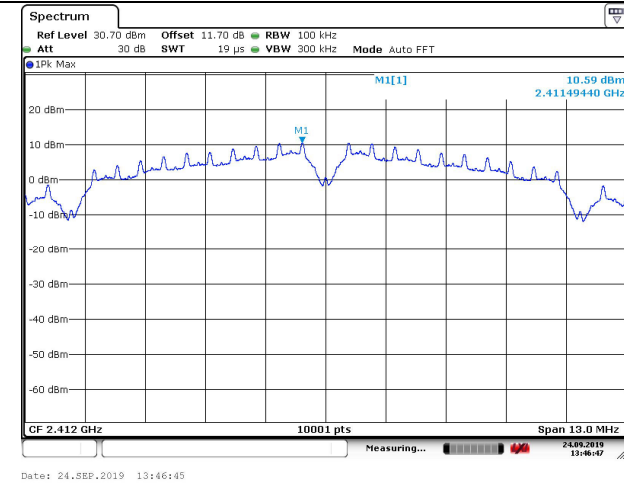


Conducted Out of band emission measurement

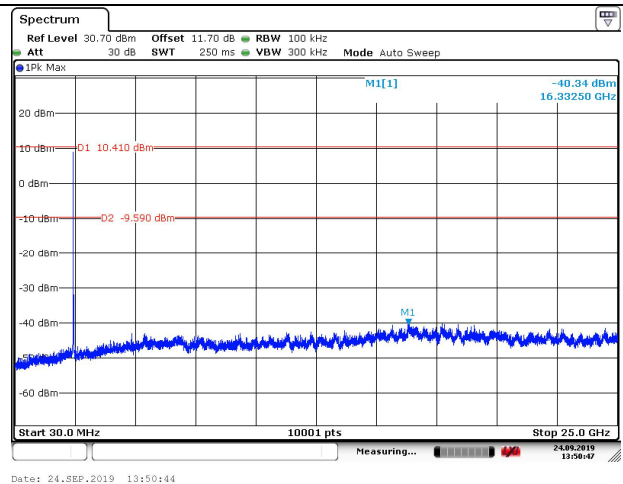
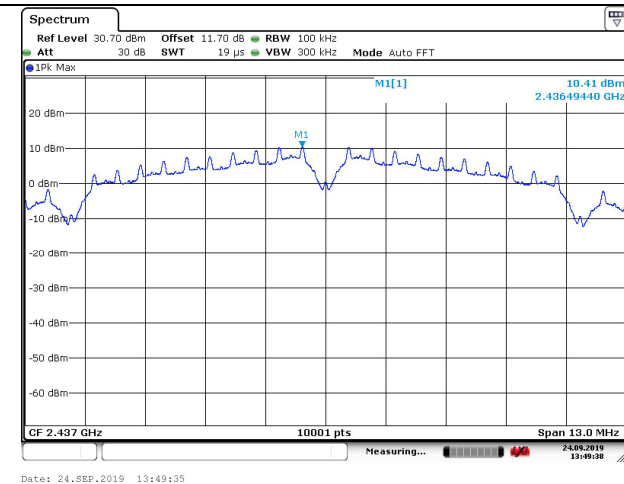
Offset 11.7dB = Attenuator 10dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1.5dB

Test Mode: 802.11b

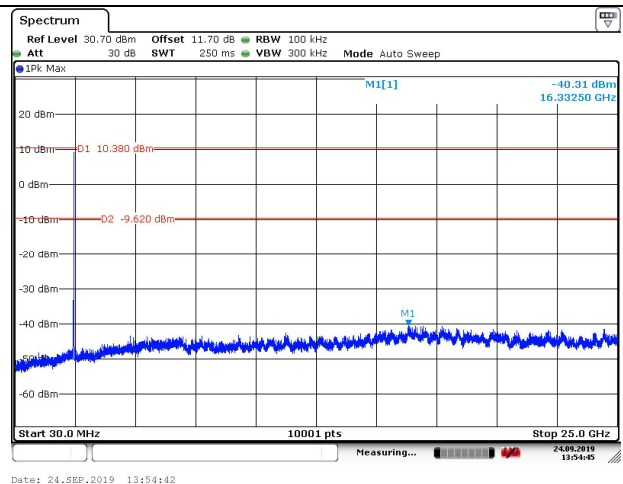
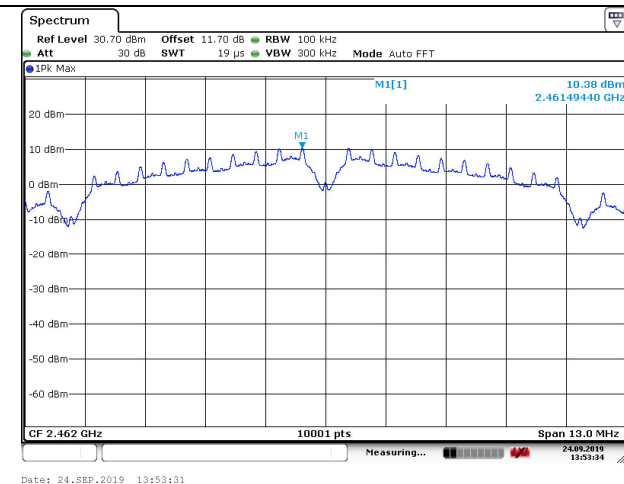
CH1



CH6

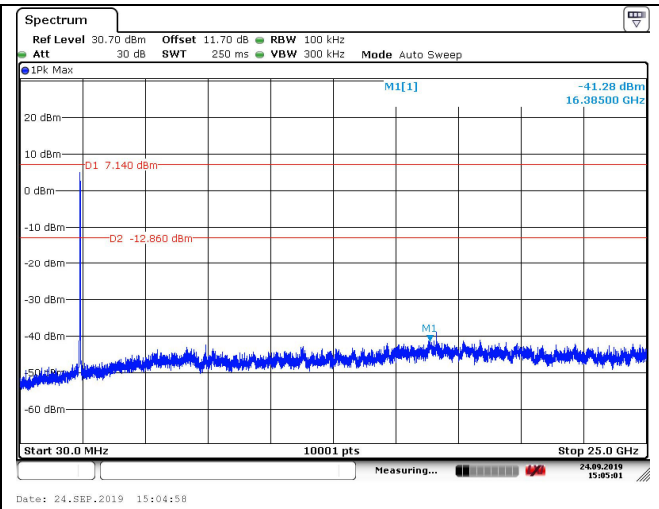
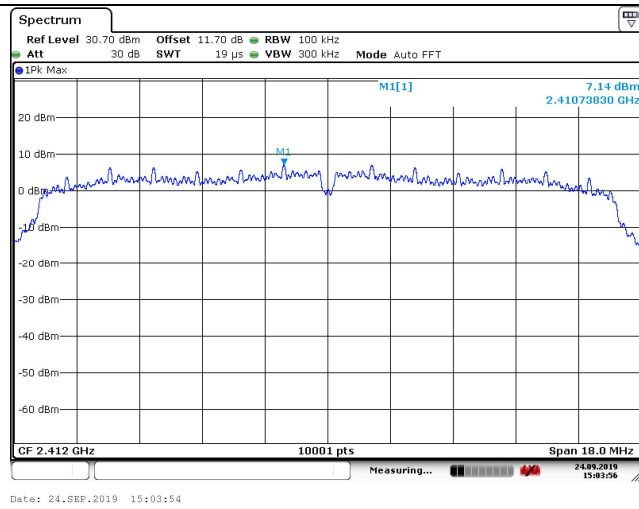


CH11

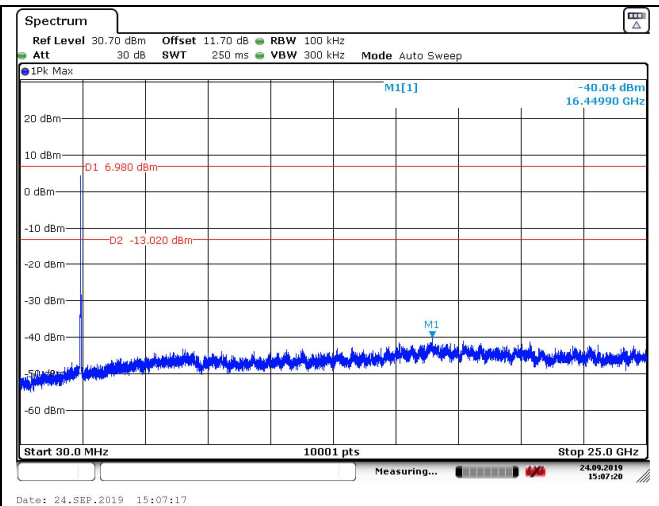
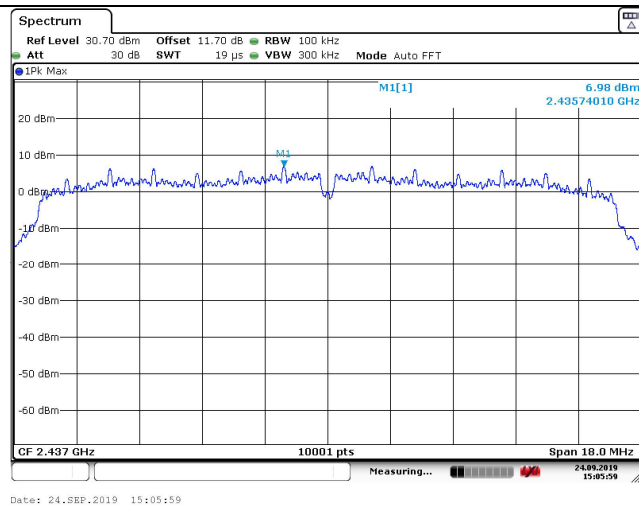


Test Mode: 802.11g

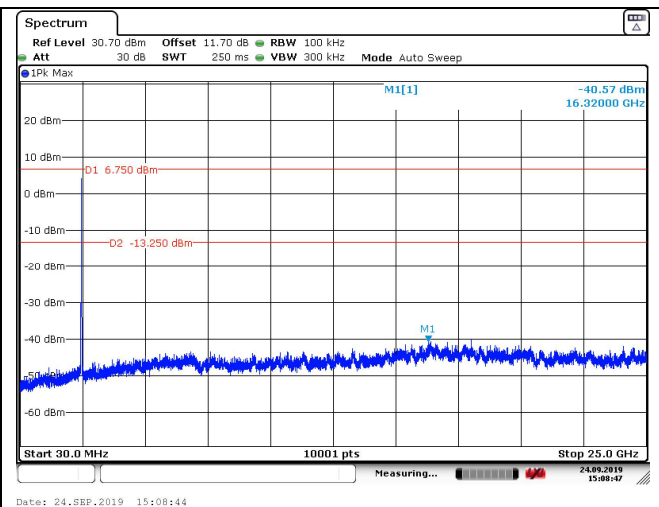
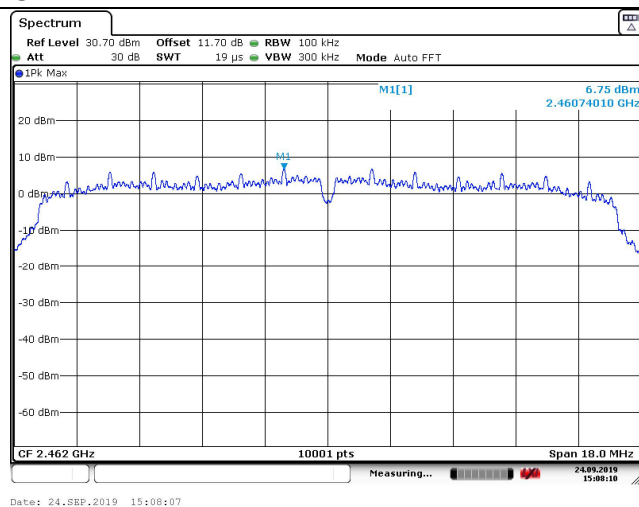
CH1



CH6

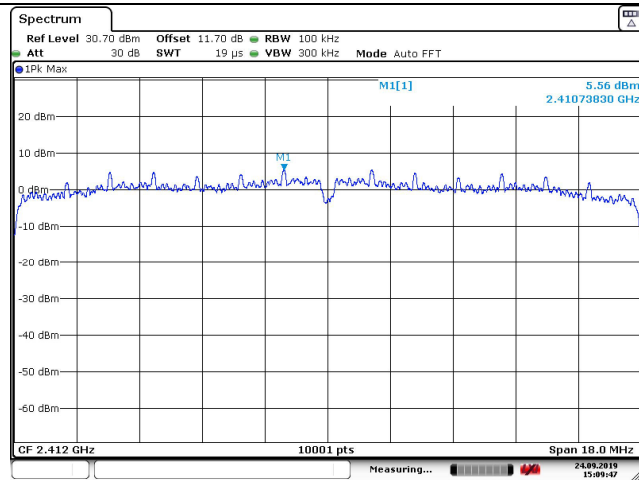


CH11

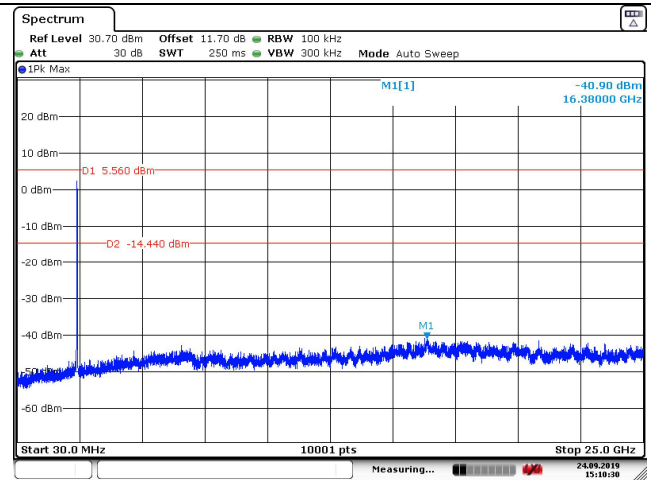


Test Mode: 802.11n (HT20)

CH1

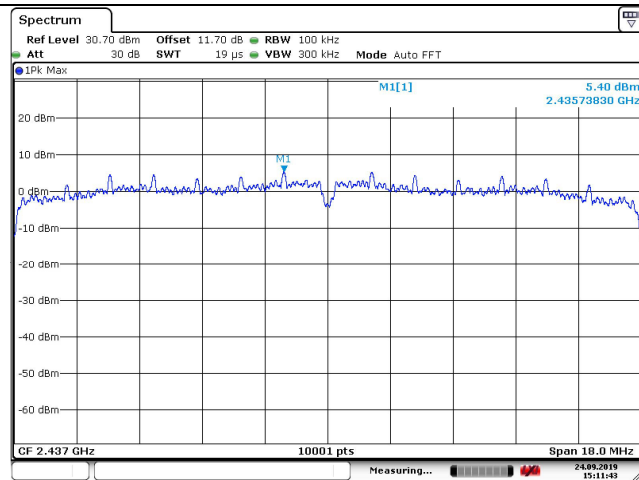


Date: 24.SEP.2019 15:09:44

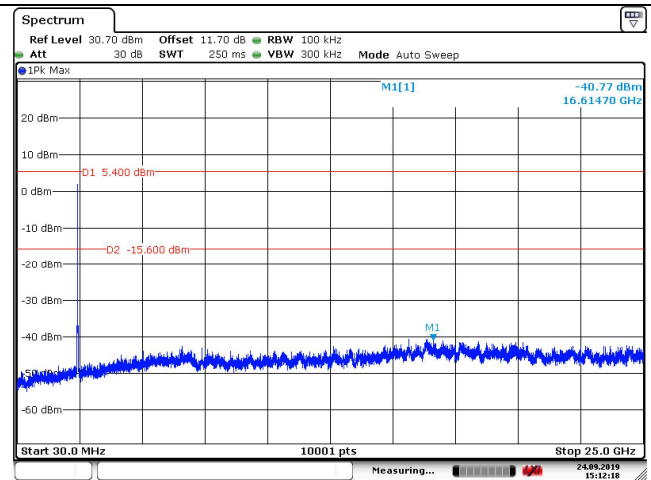


Date: 24.SEP.2019 15:10:27

CH6

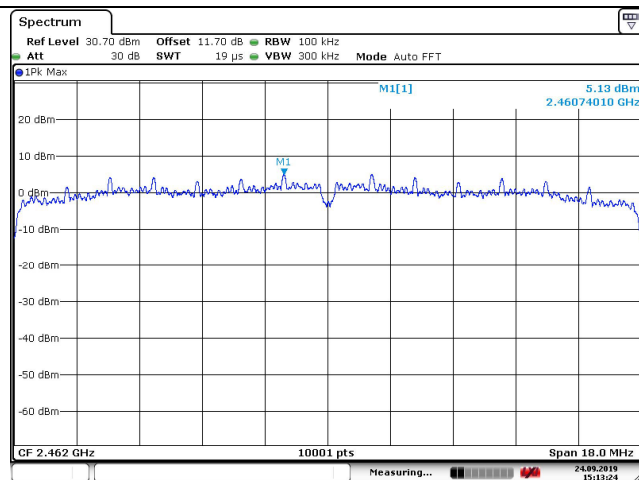


Date: 24.SEP.2019 15:11:40

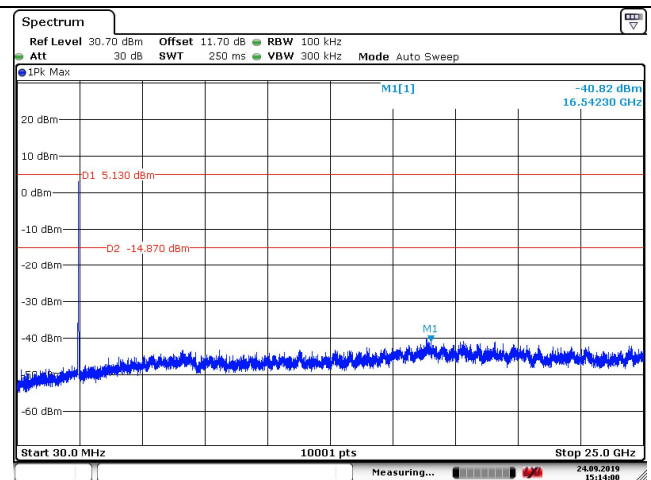


Date: 24.SEP.2019 15:12:15

CH11



Date: 24.SEP.2019 15:13:21



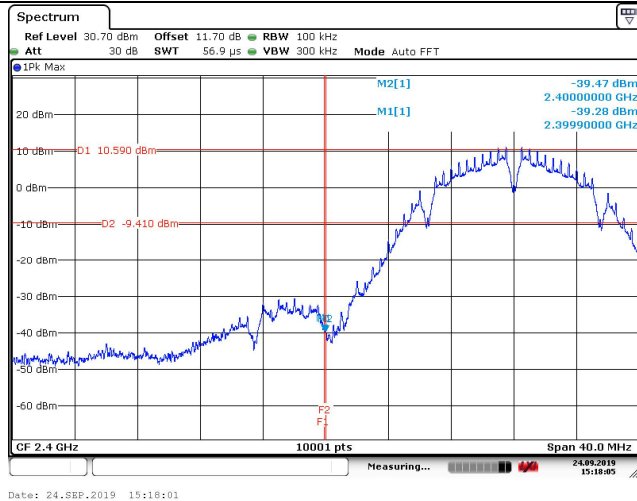
Date: 24.SEP.2019 15:13:56

Band edge measurement (RF Conducted measurement)

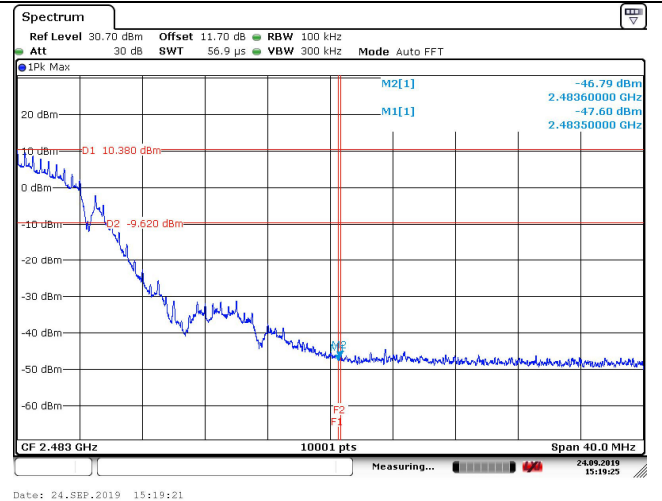
Offset 11.7dB = Attenuator 10dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1.5dB

Test Mode: 802.11b

CH1

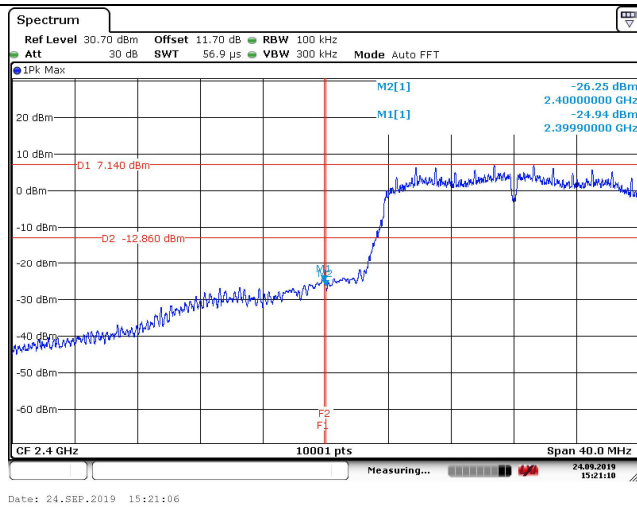


CH11

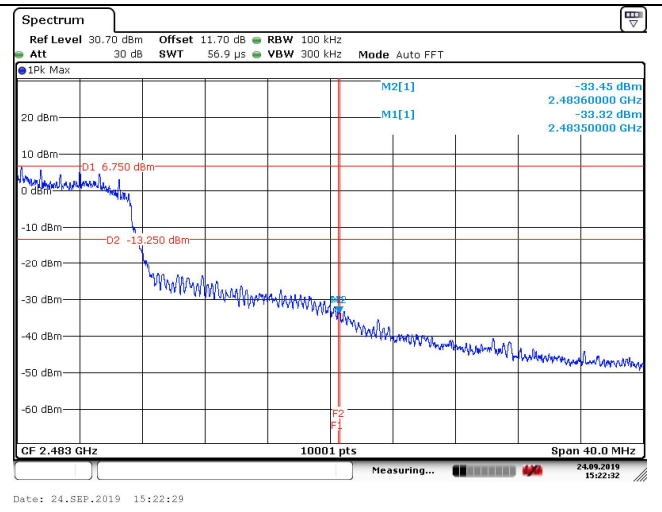


Test Mode: 802.11g

CH1

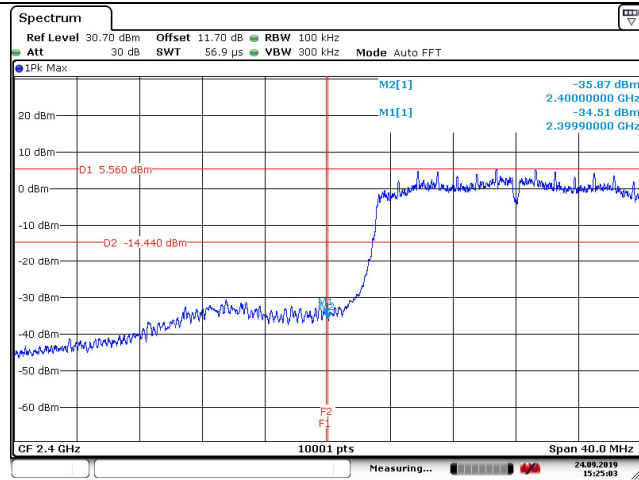


CH11

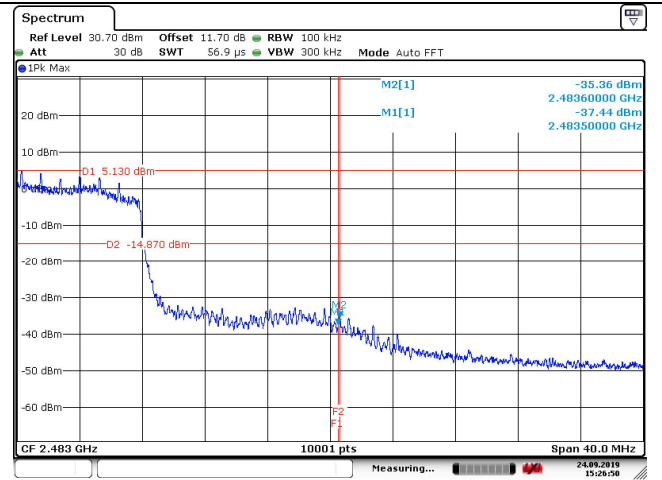


Test Mode: 802.11n (HT20)

CH1



CH11



APPENDIX B – TEST DATA OF RADIATED EMISSION

Radiated Emission Band Edge

The measurement results are obtained as described below:

Measure Level = Reading Level + cable loss + antenna factor

Sample calculation: (99.35 dBuV/m) = (65.35 dBμV) + (8.90 dB) + (25.10 dB), the corresponding frequency is 2412MHz.

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

Polarity:Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuv/m)	cable loss (dB)	antenna factor (dB)
1	2412	99.35	65.35	N/A	N/A	8.90	25.10
2	2390	45.42	11.42	-28.58	74.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

Polarity:Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuv/m)	cable loss (dB)	antenna factor (dB)
1	2412	96.92	62.92	N/A	N/A	8.90	25.10
2	2390	44.52	10.52	-29.48	74.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

Polarity:Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuv/m)	cable loss (dB)	antenna factor (dB)
1	2412	95.98	61.98	N/A	N/A	8.90	25.10
2	2390	36.71	2.71	-17.29	54.00	8.90	25.10

Carrier frequency (MHz): 2412

Channel No.:1

Test Mode: 802.11b

Polarity:Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	93.25	59.25	N/A	N/A	8.90	25.10
2	2390	36.28	2.28	-17.72	54.00	8.90	25.10

Carrier frequency (MHz): 2462

Channel No.:11

Test Mode: 802.11b

Polarity:Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	99.93	65.93	N/A	N/A	8.90	25.10
2	2483.5	46.17	12.17	-27.83	74.00	8.90	25.10

Carrier frequency (MHz): 2462

Channel No.:11

Test Mode: 802.11b

Polarity:Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	97.87	63.87	N/A	N/A	8.90	25.10
2	2483.5	45.56	11.56	-28.44	74.00	8.90	25.10

Carrier frequency (MHz): 2462

Channel No.:11

Test Mode: 802.11b

Polarity:Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	95.83	61.83	N/A	N/A	8.90	25.10
2	2483.5	35.67	1.67	-18.33	54.00	8.90	25.10

Carrier frequency (MHz): 2462

Channel No.:11
Test Mode: 802.11b
Polarity:Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuv/m)	cable loss (dB)	antenna factor (dB)
1	2462	93.73	59.73	N/A	N/A	8.90	25.10
2	2483.5	34.85	0.85	-19.15	54.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11g
Polarity: Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuv/m)	cable loss (dB)	antenna factor (dB)
1	2412	100.34	66.34	N/A	N/A	8.90	25.10
2	2390	45.80	11.80	-28.20	74.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11g
Polarity:Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuv/m)	cable loss (dB)	antenna factor (dB)
1	2412	97.70	63.70	N/A	N/A	8.90	25.10
2	2390	45.35	11.35	-28.65	74.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11g
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuv/m)	cable loss (dB)	antenna factor (dB)
1	2412	96.08	62.08	N/A	N/A	8.90	25.10
2	2390	36.34	2.34	-17.66	54.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1

Test Mode: 802.11g
Polarity: Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	93.33	59.33	N/A	N/A	8.90	25.10
2	2390	36.93	2.93	-17.07	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.: 11
Test Mode: 802.11g
Polarity: Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	99.33	65.33	N/A	N/A	8.90	25.10
2	2483.5	46.25	12.25	-27.75	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.: 11
Test Mode: 802.11g
Polarity: Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	97.25	63.25	N/A	N/A	8.90	25.10
2	2483.5	45.61	11.61	-28.39	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.: 11
Test Mode: 802.11g
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	96.84	62.84	N/A	N/A	8.90	25.10
2	2483.5	36.25	2.25	-17.75	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.: 11
Test Mode: 802.11g

Polarity:Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	94.70	60.70	N/A	N/A	8.90	25.10
2	2483.5	37.13	3.13	-16.87	54.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20)
Polarity: Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	99.82	65.82	N/A	N/A	8.90	25.10
2	2390	46.15	12.15	-27.85	74.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20)
Polarity:Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	97.61	63.61	N/A	N/A	8.90	25.10
2	2390	46.58	12.58	-27.42	74.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20)
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	95.76	61.76	N/A	N/A	8.90	25.10
2	2390	35.24	1.24	-18.76	54.00	8.90	25.10

Carrier frequency (MHz): 2412
Channel No.:1
Test Mode: 802.11n(HT20)
Polarity:Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2412	92.79	58.79	N/A	N/A	8.90	25.10
2	2390	35.31	1.31	-18.69	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20)
Polarity: Vertical
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	99.91	65.91	N/A	N/A	8.90	25.10
2	2483.5	45.47	11.47	-28.53	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20)
Polarity:Horizontal
Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	97.85	63.85	N/A	N/A	8.90	25.10
2	2483.5	45.29	11.29	-28.71	74.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20)
Polarity: Vertical
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	95.87	61.87	N/A	N/A	8.90	25.10
2	2483.5	35.46	1.46	-18.54	54.00	8.90	25.10

Carrier frequency (MHz): 2462
Channel No.:11
Test Mode: 802.11n(HT20)
Polarity:Horizontal
Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2462	93.87	59.87	N/A	N/A	8.90	25.10
2	2483.5	35.84	1.84	-18.16	54.00	8.90	25.10

Determining Spurious Emissions Levels

A “reference path loss” is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

The measurement results are obtained as described below:

Result= $P_{mea} + A_{Rpl}$

Sample calculation: $(12.83 \text{ dB}\mu\text{V/m}) = (33.73 \text{ dB}\mu\text{V}) + (-20.9 \text{ dB/m})$, the corresponding frequency is 30.859MHz.

The worst case attitude: The eut lay down.

For 802.11b Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
30.859	12.83	-20.9	33.73	Vertical	40.00
58.2955	11.8	-18.2	30	Vertical	40.00
125.576	14.9	-21	35.9	Vertical	43.50
288	26.85	-15.5	42.35	Vertical	46.00
384.0215	28.63	-12.2	40.83	Vertical	46.00
720.0525	20.03	-4.9	24.93	Vertical	46.00

For 802.11b Channel No.:1

Frequency (MHz)	Result (dBuV/m)		ARpl (dB)	Pmea (dBuV/m)		Polarity	Limit (dBuV/m)
	PK	AV		PK	AV		
2966.200000	---	53.59	47.8	---	5.79	Vertical	54.00
22055.400000	---	51.80	25.1	---	26.7	Vertical	54.00
24383.600000	---	48.29	25.3	---	22.99	Vertical	54.00
25930.000000	---	50.75	25.4	---	25.35	Vertical	54.00

For 802.11g Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
30.9245	12.51	-20.9	33.41	Vertical	40.00
58.5125	11.78	-18.2	29.98	Vertical	40.00
125.0255	15	-21	36	Vertical	43.50
288.0085	26.87	-15.5	42.37	Vertical	46.00
384.03	28.61	-12.2	40.81	Vertical	46.00
911.7645	20.41	-1.3	21.71	Vertical	46.00

For 802.11g Channel No.:1

Frequency (MHz)	Result (dBuV/m)		ARpl (dB)	Pmea (dBuV/m)		Polarity	Limit (dBu V/m)
	PK	AV		PK	AV		
2940	---	53.4	47.8	---	5.6	Vertical	54.00
21969.200000	---	50.06	25.1	---	24.96	Vertical	54.00
23162.8	---	48.06	25.2	---	22.86	Vertical	54.00
25478.4	---	50.49	25.4	---	25.09	Vertical	54.00

For 802.11n(HT20) Channel No.:1

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
33.0465	8.79	-20.3	29.09	Vertical	40.00
58.3815	11.8	-18.2	30	Vertical	40.00
125.0485	15.1	-21	36.1	Vertical	43.50
288	26.79	-15.5	42.29	Vertical	46.00
384.0215	28.59	-12.2	40.79	Vertical	46.00
941.1725	21.02	-1	22.02	Vertical	46.00

For 802.11n(HT20) Channel No.:1

Frequency (MHz)	Result (dBuV/m)		ARpl (dB)	Pmea (dBuV/m)		Polarity	Limit (dBu V/m)
	PK	AV		PK	AV		
2933.6	---	53.52	47.9	---	5.62	Vertical	54.00
21629.8	---	48.21	25.1	---	23.11	Vertical	54.00
22207	---	50.97	25.1	---	25.87	Vertical	54.00
24024.4	---	49.09	25.3	---	23.79	Vertical	54.00
25470.4	---	51.24	25.4	---	25.84	Vertical	54.00

For 802.11b Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
30.87	12.43	-20.9	33.33	Vertical	40.00
58.544	11.78	-18.2	29.98	Vertical	40.00
123.129	15.07	-20.8	35.87	Vertical	43.50
288.0085	26.88	-15.5	42.38	Vertical	46.00
384.0215	28.62	-12.2	40.82	Vertical	46.00
951.4655	20.99	-0.8	21.79	Vertical	46.00

For 802.11b Channel No.:6

Frequency (MHz)	Result (dBuV/m)		ARpl (dB)	Pmea (dBuV/m)		Polarity	Limit (dBu V/m)
	PK	AV		PK	AV		
2993.6	---	53.71	48.1	---	5.61	Vertical	54.00
19384.6	---	48.38	25.2	---	23.18	Vertical	54.00
21595	---	48.91	25.1	---	23.81	Vertical	54.00
22183.8	---	50.84	25.1	---	25.74	Vertical	54.00
23664.4	---	49.11	25.3	---	23.81	Vertical	54.00
25380.2	---	50.29	25.4	---	24.89	Vertical	54.00

For 802.11g Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
30.12	11.21	-21.1	32.31	Vertical	40.00
58.652	11.79	-18.2	29.99	Vertical	40.00
125.9725	14.11	-21	35.11	Vertical	43.50
288.0315	26.82	-15.5	42.32	Vertical	46.00
384.013	28.58	-12.2	40.78	Vertical	46.00
950.9005	20.93	-0.9	21.83	Vertical	46.00

For 802.11g Channel No.:6

Frequency (MHz)	Result (dBuV/m)		ARpl (dB)	Pmea (dBuV/m)		Polarity	Limit (dBu V/m)
	PK	AV		PK	AV		
2915	---	53.75	47.6	---	6.15	Vertical	54.00
21980.2	---	51.6	25.1	---	26.5	Vertical	54.00
24445.4	---	48.05	25.3	---	22.75	Vertical	54.00
25913	---	50.04	25.4	---	24.64	Vertical	54.00

For 802.11n(HT20) Channel No.:6

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
30.9645	12.88	-20.9	33.78	Vertical	40.00
59.1395	11.69	-18.3	29.99	Vertical	40.00
124.857	14.95	-20.9	35.85	Vertical	43.50
288	26.77	-15.5	42.27	Vertical	46.00
384.0215	28.59	-12.2	40.79	Vertical	46.00
886.484	19.71	-1.8	21.51	Vertical	46.00

For 802.11 n(HT20) Channel No.:6

Frequency (MHz)	Result (dBuV/m)		ARpl (dB)	Pmea (dBuV/m)		Polarity	Limit (dBu V/m)
	PK	AV		PK	AV		
2929.2	---	53.45	47.9	---	5.55	Vertical	54.00
21188.2	---	48.36	25.1	---	23.26	Vertical	54.00
22199.6	---	49.82	25.1	---	24.72	Vertical	54.00
23089.2	---	48.68	25.2	---	23.48	Vertical	54.00
25384.8	---	50.05	25.4	---	24.65	Vertical	54.00

For 802.11b Channel No.:11

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
40.422	8.46	-18.1	26.56	Vertical	40.00
58.7515	11.8	-18.2	30	Vertical	40.00
125.188	14.9	-21	35.9	Vertical	43.50
288	26.81	-15.5	42.31	Vertical	46.00
384.0215	28.61	-12.2	40.81	Vertical	46.00
919.835	20.58	-1.2	21.78	Vertical	46.00

For 802.11b Channel No.:11

Frequency (MHz)	Result (dBuV/m)		ARpl (dB)	Pmea (dBuV/m)		Polarity	Limit (dBu V/m)
	PK	AV		PK	AV		
2932.8	---	53.73	47.9	---	5.83	Vertical	54.00
22029	---	50.02	25.1	---	24.92	Vertical	54.00
24451.4	---	48.79	25.3	---	23.49	Vertical	54.00
25931	---	50.45	25.4	---	25.05	Vertical	54.00